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### Occupational Employment and Wages in Erie – May 2015

Workers in the Erie Metropolitan Statistical Area had an average (mean) hourly wage of \$18.95 in May 2015, 18 percent below the nationwide average of \$23.23, according to the U.S. Bureau of Labor Statistics. Sheila Watkins, the Bureau's regional commissioner, noted that, after testing for statistical significance, wages in the local area were significantly lower than their respective national averages in 18 of the 22 major occupational groups, including arts, design, entertainment, sports, and media; computer and mathematical; and sales and related.

When compared to the nationwide distribution, Erie employment shares were significantly higher in 6 of the 22 occupational groups including production and personal care and service. Conversely, 12 groups had employment shares significantly below their national representation; these groups included transportation and material moving; management; and business and financial operations. (See [table A](#) and box note at end of release.)

**Table A. Occupational employment and wages by major occupational group, United States and Erie metropolitan area, and measures of statistical significance, May 2015**

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Erie		United States	Erie		Percent difference <sup>(1)</sup>
Total, all occupations.....	100%	100%		\$23.23	18.95	*	-18
Management.....	5.0	3.2	*	55.30	49.21	*	-11
Business and financial operations.....	5.1	3.3	*	35.48	28.74	*	-19
Computer and mathematical.....	2.9	1.2	*	41.43	32.02	*	-23
Architecture and engineering.....	1.8	1.2	*	39.89	32.16	*	-19
Life, physical, and social science.....	0.8	0.3	*	34.24	34.88		2
Community and social service.....	1.4	2.1	*	22.19	19.30	*	-13
Legal.....	0.8	0.4	*	49.74	43.64		-12
Education, training, and library.....	6.2	6.7		25.48	23.57	*	-7
Arts, design, entertainment, sports, and media.....	1.3	0.7	*	27.39	18.97	*	-31
Healthcare practitioners and technical.....	5.8	6.7	*	37.40	34.38	*	-8
Healthcare support.....	2.9	4.1	*	14.19	12.19	*	-14
Protective service.....	2.4	2.3		21.45	21.77		1
Food preparation and serving related.....	9.1	10.0	*	10.98	9.58	*	-13
Building and grounds cleaning and maintenance..	3.2	3.3		13.02	10.85	*	-17
Personal care and service.....	3.1	4.6	*	12.33	11.05	*	-10
Sales and related.....	10.5	10.5		18.90	15.06	*	-20
Office and administrative support.....	15.8	15.0	*	17.47	15.44	*	-12
Farming, fishing, and forestry.....	0.3	0.0	*	12.67	15.47		22

**Table A. Occupational employment and wages by major occupational group, United States and Erie metropolitan area, and measures of statistical significance, May 2015 - Continued**

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Erie		United States	Erie		Percent difference <sup>(1)</sup>
Construction and extraction.....	4.0	2.8	*	22.88	20.62	*	-10
Installation, maintenance, and repair.....	3.9	3.5	*	22.11	19.06	*	-14
Production.....	6.6	13.0	*	17.41	16.88	*	-3
Transportation and material moving.....	6.9	5.0	*	16.90	15.40	*	-9

(1) A positive percent difference measures how much the mean wage in Erie is above the national mean wage, while a negative difference reflects a lower wage.

\* The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—production—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Erie had 16,530 jobs in production, accounting for 13.0 percent of local area employment, significantly above the 6.6-percent share nationally. The average hourly wage for this occupational group locally was \$16.88, which was lower than the national average of \$17.41.

Some of the larger detailed occupations within the production group included first-line supervisors of production and operating workers (1,290) and team assemblers (1,080). Among the higher-paying jobs were first-line supervisors of production and operating workers (\$25.49) and tool and die makers (\$23.24). At the lower end of the wage scale were laundry and dry-cleaning workers and production worker helpers, with mean hourly wages of \$10.66 and \$11.84, respectively. (Detailed occupational data for the business and financial operations group are presented in [table 1](#); for a complete listing of detailed occupations go to [www.bls.gov/oes/current/oes\\_21500.htm](http://www.bls.gov/oes/current/oes_21500.htm).)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).)

For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Erie area, above-average concentrations of employment were found in several of the occupations within the production group. For instance, metal and plastic forging machine setters, operators, and tenders were employed at 6.3 times times the national rate in Erie, and metal and plastic molding, coremaking, and casting machine setters, operators and tenders at 5.0 times the U.S. average. On the other hand, packaging and filling machine operators and tenders had a location quotient of 1.0 in Erie, meaning that this particular occupation's local and national employment shares were similar.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Pennsylvania Department of Labor and Industry.

## **Notes on Occupational Employment Statistics Data**

With the issuance of data for May 2015, the OES program has incorporated redefined metropolitan area definitions as designated by the Office of Management and Budget. OES data are available for 394 metropolitan areas, 38 metropolitan divisions, and 167 OES-defined nonmetropolitan areas. A listing of the areas and their definitions can be found at [www.bls.gov/oes/current/msa\\_def.htm](http://www.bls.gov/oes/current/msa_def.htm).

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

### **Technical Note**

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OES program produces employment and wage estimates for over 800 occupations for all industries combined in the nation; the 50 states and the District of Columbia; 432 metropolitan areas and divisions; 167 nonmetropolitan areas; and Guam, Puerto Rico, and the U.S. Virgin Islands. National estimates are also available by industry for NAICS sectors, 3-, 4-, and selected 5- and 6-digit industries, and by ownership across all industries and for schools and hospitals. OES data are available at [www.bls.gov/oes/tables.htm](http://www.bls.gov/oes/tables.htm).

OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 sampled establishments in May and November each year. May 2015 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2015, November 2014, May 2014, November 2013, May 2013, and November 2012. The overall national response rate for the six panels is 73.5 percent based on establishments and 69.6 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 57.9 percent of total national employment. (Response rates are slightly lower for these estimates due to the federal shutdown in October 2013.) The sample in the Erie, Pa. Metropolitan Statistical Area included 1,632 establishments with a response rate of 76 percent. For more information about OES concepts and methodology, go to [www.bls.gov/news.release/ocwage.tn.htm](http://www.bls.gov/news.release/ocwage.tn.htm).

The May 2015 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at [www.bls.gov/soc](http://www.bls.gov/soc) and information about the 2012 NAICS is available at [www.bls.gov/bls/naics.htm](http://www.bls.gov/bls/naics.htm).

### **Metropolitan area definitions**

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Erie, Pa. Metropolitan Statistical Area** includes Erie County in Pennsylvania.

## **Additional information**

OES data are available on our regional web page at <http://www.bls.gov/regions/mid-atlantic>. Answers to frequently asked questions about the OES data are available at [www.bls.gov/oes/oes\\_ques.htm](http://www.bls.gov/oes/oes_ques.htm). Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at [www.bls.gov/oes/current/methods\\_statement.pdf](http://www.bls.gov/oes/current/methods_statement.pdf).

Information in this release will be made available to sensory impaired individuals upon request – Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Erie Metropolitan Statistical Area, May 2015**

Occupation <sup>(1)</sup>	Employment <sup>(2)</sup>		Mean wage	
	Level	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Production occupations.....	16,530	2.0	\$16.88	\$35,100
First-line supervisors of production and operating workers.....	1,290	2.3	25.49	53,020
Electrical and electronic equipment assemblers.....	440	2.2	12.52	26,040
Engine and other machine assemblers.....	30	1.0	15.61	32,460
Structural metal fabricators and fitters.....	80	1.1	17.71	36,830
Team assemblers.....	1,080	1.1	13.81	28,730
Assemblers and fabricators, all other.....	160	0.8	14.36	29,860
Bakers.....	190	1.2	12.38	25,740
Butchers and meat cutters.....	100	0.8	17.04	35,440
Food batchmakers.....	240	2.0	13.17	27,390
Food cooking machine operators and tenders.....	90	2.8	13.96	29,040
Computer-controlled machine tool operators, metal and plastic.....	330	2.4	17.10	35,560
Computer numerically controlled machine tool programmers, metal and plastic.....	80	3.4	18.85	39,210
Extruding and drawing machine setters, operators, and tenders, metal and plastic.....	350	5.3	13.23	27,510
Forging machine setters, operators, and tenders, metal and plastic.....	110	6.3	22.85	47,520
Rolling machine setters, operators, and tenders, metal and plastic.....	50	1.9	15.85	32,970
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic.....	580	3.2	14.11	29,340
Drilling and boring machine tool setters, operators, and tenders, metal and plastic.....	60	4.4	17.84	37,110
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic.....	270	4.0	16.71	34,760
Lathe and turning machine tool setters, operators, and tenders, metal and plastic.....	140	3.9	17.38	36,160
Milling and planing machine setters, operators, and tenders, metal and plastic.....	50	3.0	19.10	39,730
Machinists.....	790	2.1	19.25	40,040
Metal-refining furnace operators and tenders.....	60	3.5	19.94	41,470
Foundry mold and coremaking.....	(5)	(5)	17.40	36,190
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic.....	620	5.0	15.38	31,990
Multiple machine tool setters, operators, and tenders, metal and plastic.....	350	3.6	14.72	30,620
Tool and die makers.....	250	3.7	23.24	48,330
Welders, cutters, solderers, and brazers.....	620	1.8	16.77	34,870
Welding, soldering, and brazing machine setters, operators, and tenders.....	(5)	(5)	15.95	33,170
Heat treating equipment setters, operators, and tenders, metal and plastic.....	90	4.8	21.12	43,930
Plating and coating machine setters, operators, and tenders, metal and plastic.....	140	4.3	20.25	42,120
Prepress technicians and workers.....	30	1.0	17.02	35,410
Printing press operators.....	120	0.7	17.36	36,110
Print binding and finishing workers.....	(5)	(5)	13.77	28,630
Laundry and dry-cleaning workers.....	180	1.0	10.66	22,160
Sewing machine operators.....	40	0.3	12.63	26,260
Sawing machine setters, operators, and tenders, wood.....	40	0.9	14.61	30,380
Woodworking machine setters, operators, and tenders, except sawing.....	60	0.9	14.21	29,550
Water and wastewater treatment plant and system operators.....	130	1.2	22.34	46,460
Chemical equipment operators and tenders.....	90	1.5	18.33	38,120
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders.....	50	1.2	(5)	(5)

Grinding and polishing workers, hand.....	40	1.7	12.34	25,670
Mixing and blending machine setters, operators, and tenders.....	180	1.5	15.36	31,950
Extruding, forming, pressing, and compacting machine setters, operators, and tenders.....	(5)	(5)	12.84	26,700
Inspectors, testers, sorters, samplers, and weighers.....	860	1.8	16.85	35,040
Dental laboratory technicians.....	40	1.2	17.98	37,390
Ophthalmic laboratory technicians.....	(5)	(5)	14.90	30,980
Packaging and filling machine operators and tenders.....	330	1.0	13.53	28,150
Coating, painting, and spraying machine setters, operators, and tenders.....	240	3.0	14.75	30,680
Cleaning, washing, and metal pickling equipment operators and tenders.....	50	3.2	15.02	31,250
Cooling and freezing equipment operators and tenders.....	40	4.9	16.54	34,390
Helpers--production workers.....	540	1.3	11.84	24,630
Production workers, all other.....	160	0.7	15.05	31,300

(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

(5) Estimates not releases.